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FIT Clinical Decision Making

TRANSIENT ELECTROCARDIOGRAPHIC SIGN OF ACUTE SEVERE MITRAL REGURGITATION

Poster Contributions
Poster Hall B1
Saturday, March 14, 2015, 10:00 a.m.-10:45 a.m.

Session Title: FIT Clinical Decision Making: Heart Failure and Cardiomyopathies
Abstract Category: Heart Failure and Cardiomyopathies
Presentation Number: 1109-166

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Background: Stress cardiomyopathy (SC) with transient severe mitral regurgitation (MR) can cause acute decompensated heart failure (ADHF).

Case: A 60-year-old woman presented with acute dyspnea and chest pain after an emotional stress 2 hours ago. Examination noted a BP of 95/63 mm Hg, a bibasilar rales, S3 and a grade 3 systolic murmur at the apex. Chest radiography noted cardiomegaly and pulmonary edema. ECG noted sinus tachycardia and low voltage. She was intubated and intravenous nitroglycerin and diuretic were given. After 4 hours, serial ECG noted a new mitral P wave in lead II and a deep negative deflected P wave in lead V1.

Decision Making: This dynamic ECG findings suggested an acute dilation of left atrium (LA). Echocardiogram noted a dilated LA and a severe MR with a velocity of 3.5 m/s and a dP/dt of 800 mm Hg/s suggestive of a low and rapid declination of reverse atrioventricular pressure gradient at the end of systole due to elevated LA pressure, and an impaired systolic function of left ventricle (LV). LV was dilated with severe hypokinesis sparing the basal segments consistent with acute SC. Coronary arteriogram noted patent coronary arteries. She was given treatment for heart failure and was discharged uneventfully on 5th day. Two weeks later, ECG showed normal P waves, and echocardiogram noted a full recovery of LV contractility and a mild MR with a velocity of 4.4 m/s and a dP/dt of 1069 mm Hg/s.

Conclusion: This case highlights the importance of serial ECG in a diagnostic workup for a transient severe MR in ADHF due to acute SC.